

advised that the user should be under a physicians care (step 811). If the user's angina meets all five of the criteria, then the user's chest pain is classified as typical angina (step 813). If a user has atypical or typical angina, then the stability of the angina is determined (step 814). If it is determined that the user's angina is unstable and not low risk unstable angina, then the user's risk of having a heart attack is determined, as described below (step 816). If it is determined in step 816 that the user has a high or intermediate risk of having a heart attack (steps 817-818), then the probability of diagnosis section 800 is exited to the main program. If the user has stable angina, low risk unstable angina (step 815), or a low risk of having a heart attack (steps 817-818), then the risk that the chest pain is CAD is determined (step 819).

Next, using the fasting blood sugar, lipid levels, and left ventricular hypertrophy information collected during the medical history collection, and using hemoglobin and resting ECG information collected in step 820, a more accurate risk that user's chest pain is CAD is determined for those users that have diabetes and hyperlipidemia (step 821).

If there is a high risk that the user's chest pain is CAD (step 822), then information regarding the options available to the user's physician is displayed (step 823). If there is an intermediate risk that the user's chest pain is CAD (step 824), then the need for further testing is explained to the user (step 825). In the case of either a high or an intermediate risk (step 822, 824), a summary of the information provided by the user is outputted (step 827) and the probability of diagnosis section 800 is exited to the main program.

If there is a low risk that the user's chest pain is CAD (step 822-824), then possible causes for the chest pain are

displayed (step 826). If the user has the results from a stress test (step 827), then step 827 is executed as described above. If the user does not have the results from a stress test, then probability of diagnosis section 800 is exited to the main program.

Figure 8A illustrates a flow chart for determining the quality of a chest pain. The user is queried whether the chest pain is heavy, squeezing, constricting, pressure-like, suffocating, choking, vice-like, sharp, stabbing or tearing (steps 831-840). If the chest pain is heavy squeezing, constricting, pressure-like, suffocating, choking and/or vice-like, then the first of the five criteria has been met (steps 841-847).

Figure 8B illustrates a flow chart for determining the location of a chest pain. The user is queried whether the chest pain is:

1. Located in the upper breast bone (sternum) (step 848).
2. Radiating to the jaw, or upper abdomen (step 849).
3. Located between the shoulder blades (step 850).
4. Located above the jaw or below the upper abdomen (step 851).
5. Radiating to the back (step 852).

If 1, 2, and/or 3 is true, then the second of the five criteria has been met (steps 853-855).

Figure 8C illustrates a flow chart for determining the duration of a chest pain. The user is queried whether the chest pain lasts minutes, seconds, or multiple hours (steps 856-858). If the chest pain last minutes, then the third of the five criteria has been met (step 859).

Figure 8D illustrates a flow chart for determining what provokes a chest pain. The user is queried whether exertion, emotional stress, coughing, bending or twisting, deep

palpation and/or lying down provokes the chest pain (steps 860-865). If the user responds that exertions and/or emotional stress provokes the chest pain, then the fourth of the five criteria has been met (steps 866-867).

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Figure 8E illustrates a flow chart for determining what provides relief for a chest pain. The user is queried whether rest, nitroglycerine, antacids, and/or belching offer pain relief (steps 868-872). If rest and/or nitroglycerine offer pain relief for the chest pain, then the fifth of the five criteria has been met (steps 873-874).

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Figure 8F illustrates a flow chart for determining the stability of angina (chest pain). First, the user is queried whether the user has angina now (step 875). If the user has angina, the probability of diagnosis section is exited to the main program. If the user does not have angina now, the user is queried about when the angina first started (steps 876-879). Next, the user is queried whether his or her angina happens at night or at rest, and while the user is moving around (steps 880-882). The user is queried whether his or her angina lasts at least 15-20 minutes (step 883). Next, the user is queried whether his or her angina is increasing, makes him breathless or lightheaded, and limits his or her lifestyle (steps 883-886). Based on the user's responses in steps 875-886, the user's angina is classified as stable or unstable, and the risk of the angina leading to a heart attack is determined using Clinical Practice Guideline, Number 10, "Unstable Angina: Diagnosis and Management" published by the U.S. Department of Health and Human Services Agency for Healthcare Policy and Research.

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Figure 8G illustrates a flow chart of the step of determining the risk that the angina is CAD. The risk is determined based on information described in Table 9 of the paper entitled "ACC/AHA/ACP-ASIM Guidelines for the Management of Patients with Chronic Stable Angina" published in the Journal of the

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